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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/542,812

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Klaus Hofmann

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EXAMINER

WILLIAMS, THOMAS J

ART UNIT

PAPER NUMBER

3683

MAIL DATE

DELIVERY MODE

12/20/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/542,812

Applicant(s)

HOFMANN, KLAUS

Examiner

Thomas J. Williams

Art Unit

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28-31, 33-42 and 44-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28-31, 33-42 and 44-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Acknowledgment is made in the receipt of the amendment filed November 6, 2007.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 28-31 and 36-38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Muller.

Re-claims 28 and 30, Muller teaches a clamping device, comprising: a base element 3 is connected rigidly by at least two adjacent wall sections 13 to a force applying element 7, the clamping forces are transferred to object 9; wall sections 13 define a sealed pressure chamber that is pressurized with a positive or negative pressure, the two wall sections have a bending region (see figures 1a and 1b), in the unpressurized built-in state the two wall sections 13 exert a predetermined clamping force on the object, (see figure 1a and column 5 lines 42-54), the two walls and the bending regions are shaped and dimensioned such that from an initial position the pressure of the chamber (figure 1a) a first pressure is applied to the pressure chamber resulting in an increase in the curvature of the bending regions (see figure 1b), thereby reducing the clamping and/or braking force applied to the object 9; the wall sections are connected in a pressure tight manner to the force applying element; the pressure chamber is sealed at the side regions by means of lateral sealing elements (broadly interpreted as the connection portion of the body with the wall sections). However, Muller fails to teach the wall sections as being separate parts from

the body. It is the opinion of the examiner that the wall sections are capable of being formed as separate parts, since once assembled they would still form a sealed pressure chamber with the body, and as such perform in the predicted manner. In addition, by forming the wall sections as separate parts one could use different materials for the wall sections than that used for the body, thereby optimizing the response of the wall sections to the change in pressure.

As such, it would have been obvious to one of ordinary skill in the art to have formed the wall sections of Muller as separate parts, thereby optimizing the desired response from the wall sections in regards to the clamping force, in addition having the wall sections formed as separate parts would have yielded the predictable result of a clamping force being applied when the fluid pressure is released.

Re-claim 29, Muller teaches the wall sections as being parallel to each other in the unpressurized state, and separated by a relatively short distance, see column 5 lines 19-22. However, Muller fails to specify the distance between the two wall sections as being in the range from 0.1 mm to 10 mm, and preferably from 1mm to 5 mm. The examiner interprets the specific dimension between the two wall sections as merely a design choice.

As such it would have been obvious to one of ordinary skill in the art as a matter of design choice to have placed the wall sections of Muller at a distance of between 0.1 mm to 10 mm, and preferably from 1 mm to 5mm, since the applicant has not disclosed that having the wall sections separated by the recited distance solves any stated problem or is for any particular purpose and it appears that the wall sections would have performed equally well within the recited distances.

Re-claim 31, the base element 3a is provided with an attachment portion adjacent the wall sections, this attachment portion is bent at a right angle and is perpendicular to the bending regions.

Re-claim 36, wall portion 19 is interpreted as a mechanical stop.

Re-claim 37, a force applying element is positioned on each side of linear guide 9, in addition a separate embodiment of figure 6a includes a plurality of force applying elements each associated with a separate spoke defined by wall sections 13.

Re-claim 38, each spoke section of figure 6 comprises a plurality of wall sections.

4. Claims 33-35, 39-42 and 44-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muller in view of Emmert.

Re-claims 33, 34 and 45, Muller fails to teach a plastic or rubber sealing elements associated with the wall sections.

Emmert teaches a clamping device provided with wall sections and an associated rubber sealing element 3, the sealing element is located between the wall sections and formed of separate parts, each sealing element is ring shaped (as viewed in figure 9). It would have been obvious to one of ordinary skill in the art to have provided each of the spoke-like chambers of figure 6 in Muller with a rubber sealing element as taught by Emmert, thus ensuring an air tight sealed chamber.

Re-claim 35, elements 5 are interpreted as retaining arms projecting from the base element 3.

Re-claim 39, the base element 3a in figure 6a is ring shaped.

Re-claims 40 and 41, the force applying elements 3b are arranged within the base element 3a and forms a ring, see figures 6a and 6b.

Re-claim 42, see figure 1a and 6a.

Re-claim 43, see figure 6a.

Re-claim 44, an external periphery of the force applying element 3b is interpreted as an attachment region.

Re-claim 46, a tubular ring element, figure 6a, forms a common pressure chamber for the pairs of wall sections 13.

Re-claim 47, the pressure chamber is formed by two wall sections that are stacked upon each other, wherein one is a top wall element the other is a bottom wall element.

Re-claim 48, see figure 1a, the base is an enclosure and is defined by an upper part 19 and a lower part 3.

Re-claim 49, the spoke-like formation of figure 6a is interpreted as a slotted force applying element.

Re-claims 50 and 51, sections a-e of the claims are addressed in the above rejection of claim 28. However, Muller fails to teach the two wall sections formed by two wall elements, each wall element comprising a ring shaped, radially slotted plate, wherein the bending regions are formed in the wall element regions between the slots.

Emmert teaches two wall sections formed by wall elements (the wall elements are part of a base element, this is consistent with instant figure 8a-8c), the wall elements have a radial slotted region for receiving the bending wall regions. The wall elements would provide a level of protection for the bending wall sections from external sources that might otherwise damage the walls sections and compromise their integrity. It would have been obvious to one of ordinary skill in the art to have provided the assembly of Muller with wall elements surrounding the bending wall sections as taught by Emmert, thus protecting the bending portions from potential external damage.

Response to Arguments

5. Applicant's arguments filed November 6, 2007 have been fully considered but they are not persuasive. As stated above and with regards to claim 28, it is the opinion of the examiner that simply manufacturing the wall sections of Muller as separate pieces from the body is within the skill level of a person in the art. In particular this modification does not alter the operation of the device, and would provide the artisan the opportunity to optimize the response characteristics of wall section. In short either design would yield the same predictable result. The remarks regarding the feature of element (d) is found non-persuasive. It is the opinion of the examiner that the assembly of Muller operates in substantially the same manner as the instant invention. In fact figures 1a, 1b, 6a and 6b are substantially identical to instant figures 9a, 9b, 8b and 8c, respectively. It is noted that Muller teaches that the wall sections may take on a slight convex

shape when unpressurized (see column 5 lines 42-46), as such the tension of the wall sections would appear to actuate the brake or clamp. As such the rejection is maintained.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiries concerning this communication or earlier communications from the examiner should be directed to Thomas Williams whose telephone number is 571-272-7128. The examiner can normally be reached on Wednesday-Friday from 6:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi, can be reached at 571-272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-6584.

TJW

December 19, 2007

THOMAS J. WILLIAMS
PRIMARY EXAMINER

Thomas Williams
AU 3683
12-19-07